

1 CLAIM AMENDMENTS

2 **Listing of Claims:**

3 **CLAIMS**

- 4 1. (currently amended) A method ~~for~~ comprising forming a pattern on a surface ~~(10)~~ by
5 deposition of a mixture ~~(20)~~ that comprises an application material of molecules, oligomers,
6 nanoparticles and a combination thereof ~~(22)~~ and a phase-change transfer material ~~(24)~~, the
7 ~~method~~ step of forming comprising the steps of:
8 b.) heating the mixture ~~(20)~~ to a melt;
9 c.) depositing the melted mixture ~~(21)~~ on the surface ~~(10)~~ with a phase-change printing
10 technique, thereby the melted mixture ~~(21)~~ solidifies instantaneously when it reaches the
11 surface ~~(10)~~; and
12 d.) removing the transfer material ~~(24)~~ by sublimation.
- 13 2. (currently amended) The method according to claim 1, further comprising the step of a.)
14 mixing the application material ~~(22)~~ with the transfer material ~~(24)~~ to the mixture ~~(20)~~.
- 15 3. (currently amended) The method according to claim 1 ~~any one of the preceding claims~~,
16 wherein the step of removing the transfer material ~~(24)~~ by sublimation comprises applying a
17 low pressure to and/or heating the deposited mixture ~~(20)~~.
- 18 4. (currently amended) The method according to claim 1 ~~any one of the preceding claims~~,
19 comprising repeating ~~the~~ steps b.) to d.) to deposit multiple layers.
- 20 5. (currently amended) A process for fabricating an organic light-emitting device ~~(OLED)~~
21 comprising the steps of:
22 heating a composition ~~(20)~~ to a melt ~~(21)~~, the composition ~~(20)~~ comprises an organic
23 material ~~(22)~~ and a phase-change transfer material ~~(24)~~;

depositing the melted composition-(21) onto a surface -(10) by a phase-change printing technique, thereby the melted composition-(21) solidifies instantaneously when it reaches the surface -(10); and
removing the transfer material-(24) by sublimation whereby the organic material-(22) remains on the surface -(10).

6. (currently amended) A composition (20) for patterning a surface -(10) comprising an application material-(22) for forming a pattern, and
a phase-change transfer material-(24) that sublimates after patterning by an action, wherein the application material-(22) comprises one of an organic material, an organic light-emitting device ~~OLED~~ material, biological molecules, nanoparticles, and a combination thereof.

7. (original) The composition according to claim 6 being a mixed powder.

8. (currently amended) The composition according to claim 6 ~~one of the preceding claims 6 and 7~~, wherein the transfer material-(24) is a solid at approximately 0°C and melts at ambient pressure below 200°C.

9. (currently amended) The composition according to claim 6 ~~one of the preceding claims 6 and 8~~, wherein the transfer material-(24) comprises cyclododecane or its derivatives.

10. (currently amended) The composition according to claim 6 ~~one of the preceding claims 6 and 9~~, wherein the transfer material-(24) comprises one or more components.

11. (currently amended) The method according to claim 1, ~~claims 1 to 4~~ used to fabricate one of an organic electronic device, a monochrome and/or color display, a biological pattern, a biochip, a sensor, a semiconductor device, and a circuit.

12. (currently amended) A process for fabricating a field-effect transistor comprising the steps of: forming source and drain contacts-(402) on a substrate-(400);

1 heating a composition (20) to a melt-(21), the composition (20) comprises an organic
2 material-(22) and a phase-change transfer material-(24);
3 depositing the melted composition-(21) onto the substrate-(400) with the source and drain
4 contacts-(402) by a phase-change printing technique, thereby the melted composition-(21)
5 solidifies instantaneously when it reaches the substrate-(400);
6 removing the transfer material-(24) by sublimation whereby the organic material-(22)
7 remains on the surface -(10) as an organic semiconducting layer -(404);
8 forming an insulating layer -(406) on the organic semiconducting layer -(404); and
9 forming a gate contact-(408) on the insulating layer-(406).

10 13. (currently amended) The process according to claim 12, wherein at least one of the
11 source/drain contacts-(402), the insulating layer-(406), and the gate contact-(408) is created
12 according to the method of ~~claims 1 to 4~~ :

13 forming a pattern on a surface by deposition of a mixture that comprises an application
14 material of molecules, oligomers, nanoparticles and a combination thereof and a
15 phase-change transfer material, the step of forming comprising the steps of:
16 heating the mixture to a melt;
17 depositing the melted mixture on the surface with a phase-change printing technique,
18 thereby the melted mixture solidifies instantaneously when it reaches the surface; and
19 removing the transfer material by sublimation, by the phase-change printing technique.

20 14. (new) The process according to claim 13, wherein the step of forming further comprising
21 the step of a.) mixing the application material with the transfer material to the mixture.

22 15. (new) The process according to claim 13, wherein the step of removing the transfer
23 material by sublimation comprises applying a low pressure to and/or heating the deposited
24 mixture.

25 16. (new) The process according to claim 13, further comprising repeating the steps b.) to d.)
26 to deposit multiple layers.

1 17. (new) The method according to claim 1, wherein the step of removing the transfer material
2 by sublimation comprises applying a low pressure to and/or heating the deposited mixture,
3 and further comprising the steps of a.) mixing the application material with the transfer
4 material to the mixture; and further comprising repeating steps b.) to d.) to deposit multiple
5 layers.

6 18. (new) The composition according to claim 6, being a mixed powder, and wherein:

7 the transfer material is a solid at approximately 0°C and melts at ambient pressure below
8 200°C.

9 the transfer material comprises cyclododecane or its derivatives, and

10 the transfer material comprises a plurality of components.

11 19. (new) The method according to claim 4, used to fabricate one of an organic electronic
12 device, a monochrome and/or color display, a biological pattern, a biochip, a sensor, a
13 semiconductor device, and a circuit.

14 20. (new) The composition according to one of the preceding claim 7, wherein the transfer
15 material is a solid at approximately 0°C and melts at ambient pressure below 200°C.